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St. Jude Children's Research Hospital
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1. Current Position at St Jude

Member, Director Multimodal Functional Brain Imaging Hub St. Jude Children's Research Hospital Memphis, TN 38105	Feb.2021 – Present
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2. Education and Training

B.E. Mysore University, India	1988
M.E. PSG College of Engineering, India	1992
Ph.D. University of Tübingen, Germany <i>Summa Cum Laude</i>	2008

3. Professional Career

Senior Research Fellow Bhabha Atomic Research Center India	1991 - 1992
Research Scientist Kent Ridge Digital Labs Singapore	1992 - 1996
Project Leader Kent Ridge Digital Labs Singapore	1996 - 1999
Group Leader Kent Ridge Digital Labs Singapore	1999 - 2000
Co-Founder & CTO SmartEdge Technologies, an I2R Spinoff Singapore	2002 - 2004
Lead Scientist Institute for Infocomm Research (I2R) Singapore	2000 - 2004
Senior Research Scientist Eberhard-Karls University Tübingen, Germany	2004 - 2008
Visiting Scientist Eberhard-Karls University Tübingen, Germany	2009 - 2016
Visiting Scientist	2012 - 2015

Sri Chitra Institute of Medical Sciences and Technology India	
Visiting Scientist Eberhard-Karls University Tübingen, Germany	2012 – 2015
Assistant Professor Department of Biomedical Engineering, University of Florida Gainesville, Florida	2012 - 2015
Visiting Faculty Sri Chitra Institute of Medical Sciences and Technology India	2017 - Present
Visiting Scientist Wyss Center for Neuro Bio Engineering Geneva, Switzerland	2017 - Present
Co-Founder & CEO Neurorehab Technologies, a PUC Spin-off	2017 - Present
Director of Laboratory for Brain-Machine Interfaces and Professor Faculties of Engineering, Biology and Medicine, Pontificia Univershida Católica de Chile	2015 - 2021

4. Professional Membership

Editorial Board of Neuroimage Clinical
 Editorial Board of Frontiers in Neuroscience
 Organization for Human Brain Mapping
 Real-Time Functional Imaging and Neurofeedback (rtFIN)
 Institute of Electrical and Electronics Engineer

5. Editorial Board Appointments

Editorial board member: Neuroimage Clinical
 Editorial board member: Frontier in Neurorehabilitation
 Scientific reviewer: Neuroimage
 Scientific reviewer: Human Brain Mapping
 Scientific reviewer: Journal of Neuroscience
 Scientific reviewer: Cerebral Cortex,
 Scientific reviewer: Journal Neurorehabilitation and Neural Repair,
 Scientific reviewer: Journal of Neural Engineering,
 Scientific reviewer: Cognitive Neuroscience,
 Scientific reviewer: IEEE Signal Processing,
 Scientific reviewer: Biological Psychology,
 Scientific reviewer: Magnetic Resonance Imaging.

6. Honors and Awards

Infocomm Development Authority (IDA) Award

for the development of a suite of products and services based on intelligent wireless technology called SmartEdge built in Sitaram's laboratory.

2002

Indian President's Award of *Visiting Professorship* in Neuroscience and Neuroimaging

in the Department of Neurology, Sri Chitra Tirunal University of Medical Sciences and Technology, Trivandrum, India. SMT was pronounced by the government of India as a scientific and medical institution of national importance. This award is given to reputed international scientists of Indian origin to establish and direct research centers at the forefront of different disciplines in science and engineering to selected host universities in India, of which SMT is one.	2009-2012
BrainChile Prize: Neurorehab Technologies, a technology spinoff company founded by Drs. Sitaram and Ruiz, won the first place in the BrainChile competition organized and held every year by the Innovation Center of PUC.	2016
Best Research Award: "Neural mechanism of brain self-regulation", International Conference on Real-time Functional Imaging and Neurofeedback, 28 Nov-2 Dec, 2017, Nara (Japan).	2017
Indian Prime Minister's Special Award (named Vajra) for <i>Visiting Professorship in Neuroscience</i> in the Department of Neurology, Sri Chitra Tirunal University of Medical Sciences and Technology (SMT), Trivandrum, India. SMT was pronounced by the government of India as a scientific and medical institution of national importance. This award is given to reputed international scientists of Indian origin to establish and direct research centers at the forefront of different disciplines in science and engineering to selected host universities in India, of which SMT is one.	2018-2020
Visiting Scientist at the Wyss Center for Neuro & Bio Engineering, Geneva, Switzerland. This is an ongoing contract to provide scientific and technologies advice and mentoring to scientists and engineers in the areas of neuroscience, neuroimaging and neural engineering. The Wyss Center is an independent, not for profit organization that provides the expertise, facilities and resources to transform creative neuroscience research into clinical solutions that will improve the lives of people with nervous system disorders.	2018-2021

7. Professional Administrative Services

Research Day Organization Committee, University of Florida	2012-2015
Seminar Series Organization Committee, University of Florida	2012-2015
Research Committee, University of Florida, University of Florida	2012-2015
Graduate Affairs Committee, University of Florida	2012-2015
Organizing committee of the rtFIN 2012 International Conference, ETH Member; Zurich, Switzerland	2012
Chair and Host of the International Conference on Realtime Functional Imaging and Neurofeedback (rtFIN) Gainesville, Florida Feb 11-13.	2015
Laboratory for Brain-Machine Interfaces and Neuromodulation: Founder; in collaboration with Prof. Sergio Ruiz. He led the laboratory where a number of academics from UC, University of Valparaiso, University of Concepcion conduct research, grant funding from Anillos, 2 Fondecyts, NIH, SEED with 6 PhD students, 2 post-docs, a number of graduate and under-graduate students, and international visiting researchers.	2015
Executive Committee of International Conference on Realtime Functional Imaging and Neurofeedback (rtFIN 2015), Member; Nara, Japan,	2017

Dates

8. Formal Education/Teaching Activities

i. Courses in the PUC

Functional and structural imaging and neuromodulation	2015 – Present
IBM 3001 Brain-Machine Interfaces	2015 – Present
IBM 2123 Dinseño en Ingeniería Biomédica 1 y II	2018 – Present
IBM 2122 Dinseño en Ingeniería Biomédica 1 y II	2018 – Present

ii. Courses Taught Earlier

Java Programming - Institute for Infocomm Research (Singapore)	1996 – 2004
Object Oriented Software Design and Programming - Institute for Infocomm Research (Singapore)	1996 – 2004
Multivariate Pattern Classification - University of Tuebingen (Germany)	2004 – 2008
Matlab Programming for Neuroscientists - University of Tuebingen (Germany)	2004 – 2008
Functional and Structural Neuroimaging - University of Tuebingen (Germany)	2008 – 2012
Medical Psychology - University of Tuebingen (Germany)	2008 – 2012
BME 1008 Introduction to Biomedical Engineering - University of Florida (USA)	2012 – 2015
BME 6360 Neural Engineering – University of Florida (USA)	2012 – 2015
BME 6938 Brain-Machine Interfaces - University of Florida (USA)	2012 – 2015
BME 4931 Neural Systems Modeling - University of Florida (USA)	2012 – 2015

iii. Student Mentorship

Balint Varkuti, Univ. Tuebingen, Germany (MS) Principal Advisor	2008
Vanessa Singh, Univ. Tuebingen, Germany (MS) Principal Advisor	2010
Sangkyun Lee, Univ. Tuebingen, Germany (PhD) Principal Advisor	2010
Sergio Ruiz, Univ. Tuebingen, Germany (PhD) Principal Advisor	2011
Neethu Robinson, Nanyang Tech. Univ., Singapore (PhD) Co- Advisor	2011
Sunjung Kim, Univ. Tuebingen, Germany (PhD) Principal Advisor	2012
Balint Varkuti, Univ. Tuebingen, Germany (PhD) Principal Advisor	2012
Markus Schürholz, Univ. Tuebingen, Germany (PhD) Co- Advisor	2012
Andreas Ray, Univ. Tuebingen, Germany (MS) Principal Advisor	2013
Nalin Gupta, Indian Institute of Technology, Karagpur (MS) Principal Advisor	2013
Mohit Rana, Univ. Tuebingen, Germany (PhD) Principal Advisor	2014
Josue Dalboni da Rocha, Univ. Florida, USA (PhD) Principal Advisor	2015
Mohit Rana, Univ. Florida, USA (Postdoc) Principal Advisor	2015
Anis Davoudi, Univ. Florida, USA (MS) Principal Advisor	2015
Korhan Buyuturkoglu, Univ. Tuebingen, Germany (PhD) Principal Advisor	2015
Paolo Rogerio, Univ. Tuebingen, Germany (PhD) Principal Advisor	2015
Sarah Bütof, Univ. Tuebingen, Germany (MS) Co- Advisor	2015
Pradyumna Sepulveda, PUC, Chile (MS) Co-Advisor	2016
Mariana Zurita, PUC, Chile (MS) Co-Advisor	2016
Enrico Opri, University of Florida, USA (MS) Principal Advisor	2016
Patricia Vargas, PUC, Chile (Postdoc) Co-Advisor	2017
Abhi Bhutadia, Univ. California, Berkeley (BS) Co-Advisor	2017
Nagaraju D.B., Univ. Florida, USA (MS) Co- Advisor	2017
Marc Charbel, University of Florida, USA (PhD) Principal Advisor	2017
Aniruddh Ravindran, University of Florida, USA (PhD) Principal Advisor	2017
Chiara Fioravanti, Univ. Tuebingen, Germany (PhD) Co-Advisor	2018
Diljit Singh Kajal, Univ. Tuebingen, Germany (PhD) Co-Advisor	2018
Ali Zaidi, Univ. Tuebingen, Germany (PhD) Principal Advisor	2018
Sujesh Sreedharan, Sri Chitra Institute of Med. Sciences, India (PhD) Principal Advisor	2018
Jaime Pereira, PUC, Chile (PhD) Co-Advisor	2018
Martin Irani, Univ. de Chile (BS) Principal Advisor	2018
Mohit Rana, PUC, Chile (Postdoc) Co-Advisor	2018
Javier Trincado, PUC, Chile (MD) Principal Advisor	2018
Rajesh Pillai, Sri Chitra Institute of Med. Sciences, India (PhD) Co-Advisor	2019

Julio Rodino, Univ. of Chile (BS) Principal Advisor	2018 – 2019
Gabriela Vargas (PhD) Principal Advisor	2019 – 2022
Natalia Brodensky, PUC, Chile (BS) Principal Advisor	2019
Andrea Sanchez, PUC, Chile (PhD) Principal Advisor	2020
Ishani Thakkar, PUC, Chile (PhD) Co-Advisor	2020
Carlos Valle, PUC, Chile (PhD) Co-Advisor	2021
Darshana J, PUC, Chile (PhD) Principal Advisor	2021
Simon Salgado, PUC, Chile (PhD) Principal Advisor	2021

iv. Innovation in Teaching

Multivariate Pattern Classification - Univ. of Tuebingen (Germany)	2004 – 2008
Matlab Programming for Neuroscientists - Univ. of Tuebingen (Germany)	2004 – 2008
Functional and Structural Neuroimaging - Univ. of Tuebingen (Germany)	2008 – 2012
BME 4931 Neural Systems Modeling - Univ. of Florida (USA)	2012 - 2015
Peer - Univ. of Florida (USA)	2012 – 2015
IBM 3001 Brain-Machine Interfaces - PUC, Chile.	2015 – 2020

9. Patents

1. System and method for clinical diagnosis of Alzheimer's disease and Mild Cognitive Impairment using multilevel pattern classification of MRI Diffusion Tensor Images (DIAMAP). Inventor: Ranganatha Sitaram.
2. System and method of cessation program for nicotine addiction by using Neurofeedback technique. Inventors: Mohit Rana, Ranganatha Sitaram, Sergio Ruiz
3. A therapeutic system for Depression based on neurofeedback and brain-pattern classification of EEG signals (NEUMOD-DEP) Inventors: Sergio Ruiz, Ranganatha Sitaram, Mohit Rana
4. Programmatic quality assessment of Images. Inventors: Eric Middlebrooks, Ranganatha Sitaram, Mohit Rana, Jake Rieke and Alissa Old Crow. Provisional US patent
5. Smart Interactive Billboard Device. Bao Xiaoming, Ranganatha Sitaram, Ramanath Padmanabhan. International Patent Application Number: PCT/SG01/00115
6. A System for Interactive Information Display on a Billboard Inventors. Ranganatha Sitaram, Ramanath Padmanabhan. Patent Application Number: 200301560-9
7. Improved Method of Co-ordinating a Group of Toys. Ranganatha Sitaram, Chan Sek Yue Pat, Arcot Desai Narasimhalu. Patent Application Number: SG 90113 Date of Grant of Patent: 31/Jan/2004
8. A System, Method and Language for Programming Behaviour in Synthetic Creatures. Ranganatha Sitaram, Annapoorna Nayak Pongal. International Patent Application Number: PCT/SG01/00143 Date of Grant of Patent: 30/Jun/2005
9. Method and Apparatus for Developing and Distributing Interactive Advertisements. Ranganatha Sitaram, Ramanath Padmanabhan. International Patent Application Number: PCT/SG01/00143 Date of Grant of Patent: 27/Jan/2006
10. Portable Reward Checkout, Reward Management and Reward Redemption System. Ramanath Padmanabhan, Ranganatha Sitaram. International Patent Application Number: PCT/SG01/00143 Date of Grant of Patent: 28/Jan/2006
11. Spatiotemporal pattern classification of brain states. Inventors: Ranganatha Sitaram, Niels Birbaumer. Patent Application Number: US 12/510,755 Date of Grant of Patent: 3/Feb/2011
12. Multimodal closed-loop BCI and peripheral stimulation for neuro-rehabilitation. Inventors: Ranganatha Sitaram, Janis Daly, Mohit Rana and Aniruddh Ravidndran. Patent filed on December 22, 2015, Provisional Patent Application No. 62/270,852
13. Integrated system for fabric laying and numbering. Inventors: Dilip Kumar Sitaram, Ranganatha Sitaram. Indian patent office. 2017
14. Non-invasive functional evaluation of the human spinal cord with Near Infrared Spectroscopy. Felipe Valenzuela, Mohit Rana, Ranganatha Sitaram, Sergio Uribe Antonio Eblen-Zajjur. Filed Dec 2017

10. Technology Transfer

The following open-source software and tools were assembled and provided to the research community

1. **MANAS**: FMRI toolbox for offline pattern classification of brain states (Sitaram et al 2012, Rana, Sitaram et al 2013, Lee, Sitaram et al 2010)
2. DTI toolbox for pattern analysis of brain structural connectivity and network (Varkuti, Sitaram et al 2011).
3. **tMANAS**: FMRI toolbox for real-time pattern classification and feedback of brain states (Rana, Sitaram et al 2013).
4. EEG toolbox for offline and real-time pattern classification and feedback of brain states (Schmidt, Sitaram 2015).
5. **PRADEEP**: FNIRS toolbox for offline and real-time pattern classification and feedback of brain states (Robinson, Sitaram 2016).

11. Grant Awards

A. Completed Grants:	Dates
\$500,000 Smart Wireless Meter and Smart Billboard Technologies using SmartEdge Machine-to-Machine Technology Infocomm Development Authority of Singapore Directors: Ranganatha Sitaram & Ramanath Padmanabhan (I2R, Singapore)	2002 – 2004
\$350,000 Effective Connectivity Enhancement and Behavior in Schizophrenia: An fMRI Brain-Computer Interface Study German Research Foundation (DFG) Directors: Ranganatha Sitaram & Niels Birbaumer (Univ. of Tuebingen)	09/2010
\$350,000 Development of Real-time Support Vector Classification in an fMRI-BCI: Applications to Stroke and Lie Detection. German Research Foundation (DFG) Directors: Ranganatha Sitaram & Niels Birbaumer (Univ. of Tuebingen)	2008 - 2011
\$350,000 Volitional Regulation of Brain System for Craving using Real-time fMRI Brain-Computer Interface. German Research Foundation (DFG) Directors: Ranganatha Sitaram, Niels Birbaumer & Anil Batra (Univ. of Tuebingen)	2010 – 2013
\$350,000 Effective Connectivity Enhancement and Behavior in Schizophrenia: An fMRI Brain-Computer Interface Study German Research Foundation (DFG) Directors: Ranganatha Sitaram, Niels Birbaumer (Univ. of Tuebingen)	2010 – 2013
\$250,000 Development of a Portable Functional Near Infrared Spectroscopy Brain-Computer Interface for Stroke Rehabilitation Badenwuerttemberg State Ministry for Education and Research of Germany and Singapore Directors: Ranganatha Sitaram (Univ. of Tuebingen), Trevor Penny (National Univ. of Singapore)	2011 – 2013
\$600,000	2012 – 2015

<p>OPTOSIS: A Portable NIRS-BCI with Functional Electrical Stimulation for Stroke Rehabilitation (A Multicenter Collaboration between Germany, India, Spain and Turkey). INDIGO: European Union and DBT India Grant Call Director: Ranganatha Sitaram</p>	
<p>\$175,000 Diffusion Tensor Imaging compared to standard clinical measures of concussion in female and male collegiate athletes: a longitudinal survey across the college years Toshiba Medical Systems Director: Tony Mancuso, Co-director: Ranganatha Sitaram</p>	2013 – 2016
<p>\$150,000 Self-regulation of Anterior Insula in Patients of Obsessive Compulsive Disorder. Centre for Integrative Neuroscience (CIN), Tuebingen, Germany. Director: Ranganatha Sitaram, Co-director: Niels Birbaumer (Univ. of Tuebingen)</p>	2011 – 2013
<p>\$120,000 Neurobiological Marker for Population Differences: a Neuroeconomic Investigation with Anxiety & Depression Patients contrasted with Normal Population Department of Biotechnology (DBT), India Director: Kesavadas Chandrasekharan Co-Director: Ranganatha Sitaram (Sri Chitra, India)</p>	2011 – 2013
<p>\$120,000 Self-Regulation of Broca's Area using Real time fMRI in Post Stroke Aphasia patients Department of Biotechnology (DBT, India) Director: Kesavadas Chandrasekharan Co-Director: Ranganatha Sitaram (Sri Chitra, India)</p>	2012 – 2015
<p>\$350,000 Combined fMRI and fNIRS Brain-Computer Interface for stroke rehabilitation Veterans Affairs Hospital research funding, USA Director(s): Janis Daly and Ranganatha Sitaram</p>	2015 – 2018
<p>\$150,000 Neural Basis of Brain Self-regulation using Real-time fMRI, fNIRS and Electrophysiology in Primates. Centre for Integrative Neuroscience (CIN), Tuebingen Director: Ranganatha Sitaram, Co-director: Niels Birbaumer (Univ. of Tuebingen)</p>	2012 – 2014
<p>\$170,000 Brain computer interfaces for the enhancement of brain networks and emotion processing. Applications in depression and schizophrenia Ministry of Education, Government of Chile Director: Sergio Ruiz, International Collaborator: Ranganatha Sitaram (at that time, Univ. Of Florida)</p>	2013 – 2014
<p>\$170,000 Simultaneous fMRI and EEG recording for the study of brain functioning in a BCI system Vicerrectoría de Investigación, Pontificia Universidad Católica de Chile Director: Sergio Ruiz, International Collaborator: Ranganatha Sitaram (at that time, Univ. Of Florida)</p>	2013 – 2014
<p>\$50,000 Enhancing Positive Affect: Learned control of the Brain's Appetitive Circuit Using Real-Time FMRI Neurofeedback McKnight Brain Institute, University of Florida</p>	2014 – 2016

Director: Ranganatha Sitaram Co-director: Peter Lang

<p>Pattern classification of diffusion tensor images to understand the anatomical connectivity differences between expert singers and novices Intramural funding from Montreal Neurological Institute, Canada Director(s): Robert Zattore (MNI), Boris Kleber (University of Aarhus, Denmark), Ranga Sitaram (PUC)</p>	2015 – 2017
<p>\$100,000 Combined fNIRS and electrophysiological measures in the dorsal horn of the spinal cord for investigating neuromuscular coupling Anillo, Conycit, Chile. Director: Sergio Uribe, Collaborator: Ranganatha Sitaram</p>	2016 – 2018
<p>\$25,000 Investigation of the influence of contingent reward for learning brain self-regulation PUC-UT Austin SEED grant Director: Ranganatha Sitaram, Deputy Director: Sergio Ruiz</p>	2016 – 2017
<p>\$250,000 Biomarker of multiple sclerosis from pattern classification of DTI and fMRI images Anillo, Conycit, Chile. Director: Sergio Uribe, Collaborator: Ranganatha Sitaram</p>	2016 – 2018
<p>\$400,000 Determining Plasticity of Brain-Regulatory Mechanisms Related to Emotion Processing: A Neurofeedback Approach in Aging and Parkinson Disease National Institute of Health, R21 grant, USA Director: Natalie Ebner (Univ. of Florida), Co-investigators: Ranganatha Sitaram and Dawn Bowers (Univ. of Florida):</p>	2016 – 2018
<p>\$348,000 Self-regulation of the brain regions of emotion and reward in chronic depression: a multimodal real-time neurofeedback study Fondecyt Regular 2017, Conicyt, Chile Director: Sergio Ruiz, Co-Director: Ranganatha Sitaram</p>	2016 – 2018
<p>\$382,000 Decoding Individual Brain States of Sleep and Memories from Real-time Pattern Classification of Simultaneous fMRI and EEG Signals Fondecyt Regular 2017, Conicyt, Chile Director: Ranganatha Sitaram, Co-Director: Sergio Ruiz</p>	2017 – 2020
<p>\$975,000 Neural Mechanisms of Brain Self-regulation with Brain-Machine Interfaces and Application to Addiction Anillo, Conycit, Chile. Director: Ranganatha Sitaram; Associate Researchers: Sergio Ruiz, Wael El-dereby, Maria Rodriguez Fernandez, Pamela Guevara, Pablo Fuentealba</p>	2018 – 2020

A. **Publication Record** Peer Reviewed Publications

i. **Original Research Articles:**

1. **Sitaram, R.**, Zhang, H., Guan, C., Thulasidas, M., Hoshi, Y., Ishikawa, A., Shimizu, K., Birbaumer, N., 2007. Temporal classification of multichannel near-infrared spectroscopy signals of motor imagery for developing a brain-computer interface. *Neuroimage* 34, 1416-1427. [PMID: 17196832]
2. Weiskopf, N., **Sitaram, R.**, Josephs, O., Veit, R., Scharnowski, F., Goebel, R., Birbaumer, N., Deichmann, R.,

- Mathiak, K., 2007. Real-time functional magnetic resonance imaging: methods and applications. *Magn Reson Imaging*. [PMID; 17451904]
3. **Sitaram, R.**, Caria, A., Veit, R., Gaber, T., Giuseppina, R., Kubler, A., Birbaumer, N., 2007. fMRI Brain-Computer Interface: A Tool for Neuroscientific Research and Treatment. *Computational Intelligence and Neuroscience* 2007, Article ID 25487, 10 pages, 2007. doi:10.1155/2007/25487. [PMID: 18274615]
 4. Caria, A., Veit, R., **Sitaram, R.**, Lotze, M., Weiskopf, N., Grodd, W., Birbaumer, N., 2007. Regulation of anterior insular cortex activity using real-time fMRI. *Neuroimage* 35, 1238-1246. [PMID: 17336094]
 5. Sitaram, R., Weiskopf, N., Caria, A., Veit, R., Erb, M., Birbaumer, N., 2008. fMRI brain-computer interfaces: A tutorial on methods and applications. *IEEE Signal Processing Magazine, Special Issue on BCI*. (2008).
 6. Rota, G., **Sitaram, R.**, Veit, R., Erb, M., Weiskopf, N., Dogil, G., Birbaumer, N., 2008. Self-regulation of regional cortical activity using real-time fMRI: The right inferior frontal gyrus and linguistic processing. *Hum Brain Mapp.* 30(5):1605-14. [PMID: 18661503]
 7. **Sitaram, R.**, Caria, A., Birbaumer, N., 2009. Hemodynamic brain-computer interfaces for communication and rehabilitation. *Neural Netw.* 22(9):1320-8. Epub 2009 May 24. [PMID: 19524399]
 8. Lee, S., Ruiz, S., Caria, A., Birbaumer, N., **Sitaram, R.** Cerebral reorganization induced by real-time fMRI feedback training of the insular cortex: a multivariate investigation. *Neurorehab and Neural Rep* (2010).
 9. Lee, S., Halder, S., Kübler, A., Birbaumer, N., **Sitaram, R.** Effective functional mapping of fMRI data with support-vector machines. *Hum Brain Mapp.* 2010(a) Jan 28. [PMID: 20112242]
 10. **Sitaram R**, Lee S, Ruiz S, Rana M, Veit R, Birbaumer N. Real-time support vector classification and feedback of multiple emotional brain states. *Neuroimage.* 2010 Aug 6. 2011 May 15;56(2):753-65. [PMID: 20692351]
 11. Rota G, Handjaras G, **Sitaram R**, Birbaumer N, Dogil G. Reorganisation of functional and effective connectivity during fMRI-BCI modulation of prosody processing. *Brain Lang.* 2010 Sep 30. [PMID: 20888628]
 12. Halder, S., Furdea, A., Varkuti, B., **Sitaram, R.**, Bogdan, M., Rosenstiel, W., Birbaumer, N., Kubler, A. Auditory standard oddball and visual P300 brain-computer interface performance. *International Journal of Bioelectromagnetism* Vol. 13, 2011.
 13. Veit R, Singh V, **Sitaram R**, Caria A, Rauss K, Birbaumer N. Using real-time fMRI to learn voluntary regulation of the anterior insula in the presence of threat-related stimuli. *Soc Cogn Affect Neurosci.* 2011 Oct 7. [PMID: 21983794]
 14. Ruiz, S., Lee, S., Soekader, S., Caria, A., Veit, R., Kircher, T., Birbaumer, N., **Sitaram, R.** Learned self-regulation of anterior insula in schizophrenia: effects on emotion recognition and neural connectivity. *Hum Brain Mapp.* 2011 Oct 22. doi: 10.1002/hbm.21427.
 15. **Sitaram, R.**, Veit, R., Stevens, B., Caria, A., Birbaumer, N., Hummel, F. Acquired control of ventral premotor cortex: An exploratory real-time fMRI and TMS study. *Journal of Neurorehabilitation and Neural Repair.* 2012 Mar-Apr;26(3):256-65. [PMID: 21903976]
 16. Caria, A., **Sitaram, R.**, Veit, R., Begliomini, C., Birbaumer, N. Volitional control of anterior insula activity modulates the response to aversive stimuli. A real-time fMRI study. *Biological Psychiatry. Biol Psychiatry.* 2010 Sep 1;68(5):425-32. [PMID: 20570245]
 17. Sacchet MD, Mellinger J, **Sitaram R**, Braun C, Birbaumer N, Fetz E. Volitional control of neuromagnetic coherence. *Front. Neurosci.*, 26 December 2012 | doi: 10.3389/fnins.2012.00189. [PMID: 23271991]
 18. Várkuti B, Cavusoglu M, Kullik A, Schiffler B, Veit R, Yilmaz Ö, Rosenstiel W, Braun C, Uludag K, Birbaumer N, **Sitaram R**. Quantifying the link between anatomical connectivity, gray matter volume and regional cerebral blood flow: an integrative MRI study. *PLoS One.* 2011 Apr 15;6(4):e14801. doi:10.1371/journal.pone.0014801. [PMID: 21525993]
 19. Caria A, **Sitaram R**, Birbaumer N. Real-Time fMRI: A Tool for Local Brain Regulation. *Neuroscientist.* 2012 Oct;18(5):487-501. Epub 2011 Jun 7.
 20. Varkuti, B., Yaozhang, P., Kok Soon, Phua., Veit, R., Guan, C., **Sitaram, R.** Predicting individual Fugl-Meyer Score Gains over a 12-week Period from Functional Connectivity Changes based on repeated rs-fMRI Measurements in a subcortical Stroke Sample receiving Motor-Imagery based robot- assisted EEG-BCI Training. *Journal of Neurorehabilitation and Neural Repair* (2012).
 21. Liberati G, Dalboni da Rocha JL, van der Heiden L, Raffone A, Birbaumer N, Olivetti Belardinelli M, **Sitaram R**. Toward a Brain-Computer Interface for Alzheimer's Disease Patients by Combining Classical Conditioning and Brain State Classification. *J Alzheimers Dis.* 2012 Mar 26. [PMID: 22451316]
 22. Sulzer J, **Sitaram R**, Blefari ML, Kollias S, Birbaumer N, Stephan KE, Luft A, Gassert R. Neurofeedback-mediated self-regulation of the dopaminergic midbrain. *Neuroimage.* 2013 Mar 1;75C:176-184. doi: 10.1016/j.neuroimage.2013.02.041. [PMID: 23791838]
 23. Sreedharan S, **Sitaram R**, Paul JS, Kesavadas C. Brain-computer interfaces for neurorehabilitation. *Crit Rev Biomed Eng.* 2013;41(3):269-79. Review. [PMID:24579648]
 24. Ruiz S, Buyukturkoglu K, Rana M, Birbaumer N, Sitaram R. Real-time fMRI brain computer interfaces: Self-regulation of single brain regions to networks. *Biol Psychol.* 2013 May 1. doi:pii: S0301-0511(13)00113-0. 10.1016/j.biopsycho.2013.04.010. [PMID: 23643926]
 25. Ruiz S, Birbaumer N, **Sitaram R**. Abnormal Neural Connectivity in Schizophrenia and fMRI-Brain-Computer

- Interface as a Potential Therapeutic Approach. *Front Psychiatry*. 2013;4:17. doi: 10.3389/fpsy.2013.00017. [PMID: 23525496]
26. Halder S, Varkuti B, Bogdan M, Kuebler A, Rosenstiel W, **Sitaram R**, Birbaumer N. Prediction of brain-computer interface aptitude from individual brain structure. *Front Hum Neurosci*. 2013;7:105. doi: 10.3389/fnhum.2013.00105. PubMed [PMID: 23565083].
 27. Birbaumer N, Ruiz S, **Sitaram R**. Learned regulation of brain metabolism. *Trends Cogn Sci*. 2013 May 7. doi:pri: S1364-6613(13)00082-X. 10.1016/j.tics.2013.04.009. [PMID: 23664452]
 28. Sulzer J, Haller S, Scharnowski F, Weiskopf N, Birbaumer N, Blefari ML, Bruehl AB, Cohen LG, Decharms RC, Gassert R, Goebel R, Herwig U, Laconte S, Linden D, Luft A, Seifritz E, **Sitaram R**. Real-time fMRI neurofeedback: Progress and challenges. *Neuroimage*. 2013 Aug 1;76:386-99. Doi: 10.10615/j.neuroimage.2013.03.033 [PMID:23541800]
 29. Rana, M., Gupta, N., Lee, S., Birbaumer, N., **Sitaram, R**. A tool box for real-time subject-independent and subject-dependent classification of brain states from fMRI signals. *Front. Neurosci.*, 17 October 2013 | doi: 10.3389/fnins.2013.00170. [PMID:24151454]
 30. Lawrence EJ, Su L, Barker GJ, Medford N, Dalton J, Williams SC, Birbaumer N, Veit R, **Sitaram R**, Bodurka J, Brammer M, Giampietro V, David AS. Self-regulation of the anterior insula: Reinforcement learning using real-time fMRI neurofeedback. *Neuroimage*. 2013 Nov 11;88C:113-124. doi: 10.1016/j.neuroimage.2013.10.069. [PMID:24231399]
 31. Rea M, Rana M, Lugato N, Terekhin P, Gizzi L, Broetz D, Fallgatter A, Birbaumer N, **Sitaram R**, Caria A. Lower Limb Movement Preparation in Chronic Stroke: A Pilot Study Toward an fNIRS-BCI for Gait Rehabilitation. *Neurorehabil Neural Repair*. 2014 Jan 30. PubMed [PMID: 24482298]
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ii. Book Chapters and Monographs:

1. **Sitaram, R.**, Hoshi, Y., Cuntai, G. (Eds.), 2005. Near Infrared Spectroscopy based Brain-Computer Interface. Proceedings of the SPIE.
2. **Sitaram, R.**, Caria A., Gabet T., Kübler, A., Birbaumer, N., 2006. Biomedizinische Technik, Graz. Functional Magnetic Resonance based BCI.
3. Neuroimaging Meditation. Erb, M., **Sitaram, R.** Edited by Tan Trich Thong. Meditation in the Light of Science. Published by Sunyata Meditation Association. California Perri 2010.
4. **Sitaram, R.**, Ruiz, S., Lee, S., Birbaumer, N. Chapter Title: Real-time decoding and feedback of brain states'. Book Title: Neuromodulation and Neurofeedback. Elsevier. Eds. Coben and Evans. (2010).
5. **Sitaram R.** Hemodynamic Brain-Computer Interfaces: Techniques and Applications. VDM Verlag Dr. Mueller. Dudweiler Landstr. 99, 66123 Saarbrueken, Germany, 2010. p-135.
6. Daly, J., **Sitaram, R.** Book Chapter: "Other Medical Uses of BCI Technology" in the Book: Brain-Computer Interfaces: Principles and Practice Oxford University Press (2012). Editors, Jonathan R. Wolpaw and Elizabeth Winter Wolpaw. Pages: 351-362.
7. **Sitaram, R.** Lee, S., Birbaumer, N. Book Chapter: "BCIs that use metabolic signals" in the Book: Brain-Computer Interfaces: Principles and Practice Oxford University Press (2012). Editors, Jonathan R. Wolpaw and Elizabeth Winter Wolpaw. Pages: 301-316.
8. Ruiz, S., Birbaumer, N., **Sitaram, R.** *Brain-Computer Interface Research*, C. Guger, B. Allison, and E.C. Leuthardt (eds.), Biosystems & Biorobotics 6, 63. DOI: 10.1007/978-3-642-54707-2_7, © Springer-Verlag Berlin Heidelberg 2014.

9. Ruiz S, Birbaumer N, **Sitaram R**. Volitional Control of Neural Connectivity. *Brain-Computer Interface Research*, 63-74, 2014.
10. Editors: Ruiz S, Birbaumer N, **Sitaram R**. Learned brain self-regulation for emotional processing and attentional modulation: from theory to clinical Applications. Year: 2016. Publisher: Journal Frontiers.
11. **Sitaram R**, Sánchez Corzo A, Zurita M, Levican C, Huepe-Artigas D, Mucarquer JA, Ramírez M. Brain-Computer Interfaces and Neurofeedback for Enhancing Human Performance. Book: *Human Performance Optimization – The Science and Ethics of Enhancing Human Performance*. Eds. Matthews, M.D., Schnyer, D. Oxford University Press 2019. USA.

12. Presentations

i. Oral Presentations at Meetings:

1. Guan Cuntai, Zhu Xiaoyuan, Ranganatha Sitaram, Manoj Thulasidas, Wu Jiankang, "Dynamic Feature for robust classification of EEG Signal", submitted to 2nd International Conference on Advances in Medical Signal and Information Processing (MEDSIP), 5-8, September 2004, Malta.
2. Thulasidas, M., Guan, C., Sitaram R., Jian Kang, W., Zhu, X., Xu, W. Effect of Ocular Artifact Removal in Brain Computer Interface Accuracy. Published in the proceedings of the 26th Annual Inter Conf IEEE Engineering in Medicine and Biology Society (EMBS), Sept, 2004.
3. Xu Wenjie, Guan Cuntai, Chng Eng Siong, Sitaram R., Manoj Thulasidas, Wu Jiankang. High Accuracy Classification of EEG Signal. Paper published in the proceedings of the International Conference of Pattern Recognition (ICPR), August, 2004.
4. Sitaram, R., Guan, C., Thulasidas, M., Jian Kang, W. Comparison of artifact removal methods on their effect on motor task and imagery classification in a brain-computer interface. Paper published in the proceedings of the 2nd International Conference on Advances in Medical Signal and Information Processing (MEDSIP), September 2004, Malta.
5. Schurholz M, Rana M, Robinson N, Ramos-Murguialday A, Cho W, Rohm M, Rupp R, Birbaumer N, Sitaram R. Differences in hemodynamic activations between motor imagery and upper limb FES with NIRS. *Conf Proc IEEE Eng Med Biol Soc.* 2012 Aug;2012:4728-31.
6. Korhan Buyukturkoglu, Mohit Rana, Sergio Ruiz, Steven A. Hackley, Surjo R. Soekadar, Niels Birbaumer, Ranganatha Sitaram. Volitional Regulation of the Supplementary Motor Area with fMRI-BCI neurofeedback in Parkinson's Disease: A Pilot Study. 6th Annual International IEEE EMBS Conference on Neural Engineering, San Diego, California, USA; 11/2013.

ii. Invited Lectures

1. Anterior insula self-regulation in obsessive-compulsive disorder using real-time fMRI-brain computer interfaces Congress presentation at the 20th Annual Meeting of the Organization for Human Brain Mapping Satellite Event: 1st Joint Turkish-German Symposium on Human Neuroscience June 5-7, 2014 Berlin, Germany.
2. Effect of Motion Correction on Feedback Congress presentation at the 20th Annual Meeting of the Organization for Human Brain Mapping June 8-12, 2014, Hamburg, Germany.
3. Anterior insula self-regulation in obsessive-compulsive disorder using real-time fMRI-brain computer interfaces Congress presentation at the Society for Neuroscience Annual Meeting November 15 - 19, 2014, in Washington DC, USA
4. Towards a pattern-based BCI for affective disorders Congress presentation at the Real-time Functional Imaging and Neurofeedback Conference. February 12-13, 2015 Gainesville, FL, USA.
5. Effect of Motion Correction Algorithm on Feedback Congress presentation at the Real-time Functional Imaging and Neurofeedback Conference. February 12-13, 2015 Gainesville, FL, USA.
6. Can Neurofeedback training lead to enhancements in functional connectivity? Congress presentation at the Real-time Functional Imaging and Neurofeedback Conference.

- February 12-13, 2015 Gainesville, FL, USA.
7. Anterior Insular Self-regulation Using Real-time fMRI-Brain Computer Interfaces in Obsessive-Compulsive Disorder
Congress presentation at the Real-time Functional Imaging and Neurofeedback Conference.
February 12-13, 2015 Gainesville, FL, USA.
 8. Volitional control of phase synchrony for modulating visual perception with EEG/MEG neurofeedback: preliminary results
Congress presentation at the Real-time Functional Imaging and Neurofeedback Conference.
February 12-13, 2015 Gainesville, FL, USA.
 9. Comparison of efficiency of self-regulation learning with contingent feedback, reward and mental imagery
Congress presentation at the Real-time Functional Imaging and Neurofeedback Conference.
February 12-13, 2015 Gainesville, FL, USA.
 10. Factors influencing learning to self-regulate brain activity using real-time fMRI: comparison between conscious strategy and contingent feedback
Congress presentation at the International Society for Magnetic Resonance in Medicine (ISMRM) 23rd Annual Meeting & Exhibition
May 30-June 5, 2015, Toronto, ON, Canada.
 11. Comparison of different learning approaches for brain self-regulation using real-time fMRI
Congress presentation at the Organization for Human Brain Mapping (OHBM) 2015 Annual Meeting
June 14-18, 2015, Honolulu, HI, USA.
 12. Self-regulation of the anterior insula in nicotine addicted smokers unmotivated to quit",
Congress presentation at the Organization for Human Brain Mapping (OHBM) 2015 Annual Meeting
June 14-18, 2015, Honolulu, HI, USA.
 13. A Subject-Independent Pattern-based BCI ¹¹_{SEP} for Neurofeedback
Congress presentation at the Organization for Human Brain Mapping (OHBM) 2015 Annual Meeting
June 14-18, 2015, Honolulu, HI, USA.
 14. Neurofeedback Modulates both Functional Connectivity within the Motor System and Motor Performance
Congress presentation at the Organization for Human Brain Mapping (OHBM) 2015 Annual Meeting
June 14-18, 2015, Honolulu, HI, USA.
 15. Patterns of Functional Connectivity Reveal Conscious Perception: an MEG Study
Congress presentation at the Organization for Human Brain Mapping (OHBM) 2015 Annual Meeting
June 14-18, 2015, Honolulu HI, USA.
 16. A group-based classifier for brain-pattern matching in an EEG-Brain-Computer Interface
Congress presentation at the Annual Conference on Clinical Neurophysiology and NeuroImaging 2015 - Joint Meeting of ECNS, ISNIP and ISBET
Sept 9-13, 2015 Munich, Germany
 17. Comparison of instructed imagery and monetary reward as learning modalities in rtfMRI-Neurofeedback training
Congress presentation at the Annual Conference on Clinical Neurophysiology and NeuroImaging 2015 - Joint Meeting of ECNS, ISNIP and ISBET
Sept 9-13, 2015 Munich, Germany
 18. Self-regulation of the Fusiform Face Area with real-time fMRI Brain-Computer Interfaces in Autism Spectrum Disorders
Congress presentation at the Annual Conference on Clinical Neurophysiology and NeuroImaging 2015 - Joint Meeting of ECNS, ISNIP and ISBET
Sept 9-13, 2015. Munich, Germany
 19. Training Brain Connectivity Using Brain-Computer Interfaces: Applications in a Visual Perception Task
Congress presentation at the 5th NIPS-CIN Joint Symposium
Nov 5 - 6 2015, Okazaki, Japan.
 20. How feedback, verbal instruction and reward influence learning brain self-regulation? A real-time fMRI study
Congress presentation at the International Society for Magnetic Resonance in Medicine (ISMRM) 24th Annual Meeting & Exhibition
May 7-13, 2016, Singapore
 21. Functional connectivity self-regulation of cerebellum and primary motor areas with fMRI Brain-Computer Interfaces. Pilot results
Congress presentation at the ISMRM 24th Annual Meeting and Exhibition.
May 7 – 13, 2016. Singapore.
 22. Differential Activation of Motor Areas with Functional Connectivity Brain-Computer Interfaces
Congress presentation at the Organization for Human Brain Mapping (OHBM) 2016 Annual Meeting,
June 26-30, 2016, Geneva. Switzerland.
 23. Influence of feedback, motor imagery and reward in brain self-regulation using real-time fMRI",

- Congress presentation at the Organization for Human Brain Mapping (OHBM) 2016 Annual Meeting
June 26-30, 2016, Geneva, Switzerland
24. Brain-Machine Interfaces and Neuromodulation
Chilean-Brazilian Neuroscience Symposium
May 2016, Chile.
 25. Volitional control of Fusiform Face Area in Autism Spectrum Disorder with Brain Computer Interfaces
Congress presentation at the 22nd Annual Meeting of the Organization for Human Brain Mapping
June 26-30, 2016, Geneva, Switzerland.
 26. Volitional modulation of functional connectivity for the perception of subliminal visual stimuli
Congress presentation at the 22nd Annual Meeting of the Organization for Human Brain Mapping
June 26-30, 2016, Geneva, Switzerland.
 27. Real-time fMRI functional connectivity self-regulation and motor performance
Congress presentation at the ISMRM 25th Annual Meeting and Exhibition
April 22-24, 2017, Honolulu, HI.
 28. Functional connectivity self-regulation of cerebellum and primary motor areas with real-time fMRI Neurofeedback
Congress presentation at the XIII Annual Meeting
October 1 - 3, 2017 Sociedad Chilena de Neurociencia, Castro
 29. Temporal changes in the neural correlates during different stages of Propofol-induced anaesthesia using EEG
Congress presentation at the XIII Annual Meeting
October 1 - 3, 2017 Sociedad Chilena de Neurociencia, Castro
 30. Influence of reward on brain self-regulation observed through an fNIRS Brain-Machine Interface
Congress presentation at the XIII Annual Meeting
October 1 - 3, 2017 Sociedad Chilena de Neurociencia, Castro
 31. Changes on functional connectivity with neurofeedback based on real-time functional magnetic resonance in autism spectrum disorder
Congress presentation at the XIII Annual Meeting
October 1 - 3, 2017 Sociedad Chilena de Neurociencia, Castro
 32. Brain Self-regulation of Functional Connections and Networks using Brain-Computer Interfaces
Congress presentation at the XIII Annual Meeting
October 1 - 3, 2017 Sociedad Chilena de Neurociencia, Castro
 33. Classification of emotional states in a Brain-Computer Interface for affective disorders
Congress presentation at the LXIX Chilean Congress of Neurology, Psychiatry and Neurosurgery
October 9-11, 2017, Puerto Varas, Chile.
 34. Self-regulation of the posterior-frontal brain activity with real-time fMRI neurofeedback to influence conscious perception
Science of Consciousness Conference
April 2-7, 2018 Tucson Arizona.
 35. Neural Mechanisms of Brain Self-regulation
Wyss Center for Neuro & Bio Engineering
February 2019.
 36. Multimodal Brain-Machine Interfaces for Neuroscience Research and Clinical Rehabilitation
Department of Psychology
Pontificia Universidad Catolica de Chile. June 2019.
 37. Brain-Machine Interfaces using Brain-Machine Interfaces
University of Glasgow (UK)
June 2019.
 38. Multimodal Brain-Machine Interfaces for Neuroscience Research and Clinical Rehabilitation
University of Glasgow (UK)
June 2019